

NOTES ON THE BREEDING HABITS OF THE AMERICAN GOLDEN-EYED DUCK OR WHISTLER
(*CLANGULA CLANGULA AMERICANA*).

BY WILLIAM BREWSTER.

Plates VI and VII.

In 1897 I spent the last two weeks of May and nearly the whole of June at Lake Umbagog, living in a house-boat and devoting my time to studying and photographing birds and nests. Besides a cook and a man to manage the boat, I had with me two assistants, Mr. R. A. Gilbert, who helped me in various ways, and Mr. Clarence H. Watrous, a keen and persistent nest-hunter, to whose tireless efforts I was indebted for the subjects of some of my best notes and pictures. Our floating house proved admirably adapted to the purposes of such a trip, having, in addition to comfortable living and sleeping accommodations, a small but well arranged dark room in which the negatives were developed. By sculling when the weather was calm, with the aid of a sail when there was a favoring breeze, we were able to change our ground whenever we wished to do so, although we often found it profitable to spend several days, and occasionally as much as a week, in one place, moored to the shore at the head of some sheltered cove, where the songs of shy forest birds rose on every side, and the delicious scent of the balsams stole in through the open cabin windows, or riding at anchor sufficiently far out in the lake to escape the black flies and mosquitoes. Our daily excursions were made chiefly by water in canoes, and extended not only to every part of the lake, but for considerable distances up the rivers which flow into it. Altogether it was a delightful experience, full of interest, and not wanting in novelty, despite the fact that the region was one with which I had long been familiar.

During this season I learned much that was new to me concerning the breeding habits of the Golden-eyed Duck or Whistler. This species still nests abundantly at Umbagog, especially about the outlet and throughout the bottom lands of the Lower Megalloway River, where the forests were killed half a century ago by

the back water from the dam at Errol. Many of the trees have fallen or been cut away by the lumbermen within recent years, but enough remain to furnish nesting places for numerous Tree Swallows, Bronzed Grackles, Woodpeckers, and Whistlers, besides a few Wood Ducks, Hooded Mergansers, and an occasional pair of Goosanders.

All the Whistlers' nests which I have examined have been placed over water at heights varying from six or eight to fifty or sixty feet and in cavities in the trunks of large hard wood trees such as elms, maples, and yellow or canoe birches. As the supply of such cavities is limited, even where dead or decaying trees abound, and as the birds have no means of enlarging or otherwise improving them they are not fastidious in their choice, but readily make use of any opening which can be made to serve their purpose. Thus it happens that the nest is sometimes placed at the bottom of a hollow trunk, six, ten, or even fifteen feet below the hole at which the bird enters, at others on a level with and scarce a foot back from the entrance, which is usually rounded, and from six to fifteen inches in diameter, but occasionally is so small and irregular that the Whistler must have difficulty in forcing its bulky body through. I remember one nest to which the only access was by means of a vertical slit so narrow and jagged that it would barely admit my flattened hand.

The eggs are laid on the rotten wood or whatever other debris there may be at the bottom of the cavity. When the set is complete (never before, so far as I have observed) the bird places under, around, and even over the eggs, down plucked from her breast. The quantity of down varies greatly in different nests. Sometimes there is only a very little about the sides and bottom of the cavity; often the eggs are warmly banked and completely covered with down, while there is usually more or less clinging to the edges of the entrance hole.

The number of eggs in a completed set varies greatly. Occasionally there are but five or six, oftener from eight to ten, not infrequently as many as twelve or fifteen, while I once found nineteen, all of which almost certainly belonged to one bird. It is by no means uncommon, however, for two females to lay in the same nest, and several of the rounded, pure white, thick-shelled



FIG. 1. YOUNG WHISTLER, TWO DAYS OLD.



FIG. 2. NEST WHICH THE YOUNG WHISTLERS WERE SEEN TO LEAVE.

eggs of the Hooded Merganser are sometimes included in a set of the green, thin-shelled eggs of the Whistler. The whole bottom of the nesting cavity, be it large or small, is usually covered with eggs, and they are often piled in two layers or set on end, and packed so closely that it is as difficult to remove the first as to take a book from a tightly filled shelf.

I used to suppose that in the cases of composite sets the labor of hatching the eggs and rearing the young was performed, however unwittingly or unwillingly, solely by the original owner of the nest, or, in other words, that the Ducks which laid in the nests of other birds, whether of their own or of a different species, were simply parasitic, after the manner of the European Cuckoo and certain of the Cowbirds, but in 1897 I obtained evidence which seems to point to a different conclusion, at least as far as the Whistlers are concerned. Most of this evidence, as well as certain other observations on the breeding habits of the Whistler, is contained in the following notes, which I give nearly as I find them in my journal.

May 30. We sailed the house-boat up the Lake to-day and anchored near the edge of the flooded forest at the outlet where we intend spending a week or more. Soon after reaching this place we saw four female Whistlers flying together in a peculiar manner over the trees, now rising high in air, next descending and dashing among the trunks and branches, vibrating their wings rapidly and continuously as in ordinary flight, but describing circles about a remarkably tall stub with a shattered top. Around this they would pass a dozen times or more, gradually drawing nearer until one bird leaving the rest and pitching first downward, then sharply upward, would fly directly toward the stub and try to alight on its jagged top. The attempt usually failed, when the bird, continuing its flight, would disappear among the trees, presently returning to begin circling again; but twice it gained a foothold and remained perched for several seconds, although it had to keep its wings in constant motion to maintain its balance. Sometimes its flight was directed to a point near the top of the tree where there was a round, neat-looking hole, no doubt the entrance to a nest, for we afterward saw two Whistlers emerge from it in quick succession. We thought that all four birds tried in turn either to

alight on the stub or to enter the hole, but as we could not distinguish between them, and as no two made the attempt at the same time, this impression could not be verified. They were silent for the most part, but occasionally one of them would utter a sound not unlike the quack of a Black Duck but shorter and flatter and repeated very rapidly six or eight times.

May 31. In a short, hollow maple trunk where a Whistler nested last year we found this morning a set of eleven eggs, none of which were covered with down although they were evidently near hatching. This nest is within thirty yards of the tall stub about which the four Whistlers were circling yesterday. The entrance is at the top about twelve feet above the water.

June 2. We found a Whistler's nest to-day by watching the female. She first alighted on the water near the tree and for fifteen or twenty minutes swam or drifted idly about preening her feathers. Then she flew out over a space of open water and turned back toward the tree, describing a great loop and rising gradually until she had attained an elevation of about twenty feet when she made directly for the entrance to the nest, which was about thirty feet above the water. On nearing it she pitched up sharply for the remaining ten feet, keeping her wings in rapid motion up to the last moment, but checking her speed very considerably before she reached the hole. Some intervening branches prevented us from seeing just how she entered it. Approaching the tree quietly I took a position which commanded a good view of the hole when my companion struck the base of the trunk lightly with his paddle. The blow was immediately followed by a scratching sound, and the next instant the Whistler shot out over our heads. Although I was watching the hole intently I did not see her leave it. She seemed, indeed, to burst forth at nearly full speed and I was half inclined to believe that she began her flight within the trunk. It seemed incredible that so heavy and clumsy a bird could emerge from such a place so adroitly and get under headway so quickly. Not that this particular hole was exceptionally small. On the contrary it was of rather generous size. Its shape and position are illustrated by a photograph which I took of the tree.

June 7. Yesterday at 3 p. m. Watrous examined the Whistler's nest found May 31. Several of the eggs were chipped. This

evening, just before sunset, he found all but two hatched and the nest filled with the pretty ducklings. The old bird was sitting on both occasions. To-night she returned and reëntered the hole before Watrous had paddled one hundred yards from the tree.

June 8. I visited the Whistler's nest shortly before daybreak this morning, approaching it with great caution. The old bird was absent and at first I feared that she had removed her young during the night, but on looking into the hole I was delighted to find them still there, huddled closely together in a circle, and shivering a little, for the air was keen. There were, however, only *six* of them with the two eggs still unhatched. What can have become of the remaining three eggs or young? Watrous tells me that he did not count the eggs on the 6th, nor the young last evening, but he is very certain that none of the eggs were missing on the former occasion, for the nest seemed to be full of them, and the absence of as many as three would have left a gap that he could scarcely have failed to notice. He is less sure that there were more than six young and two eggs last night.

Feeling confident that the young would leave the nest sometime during the day, I determined to see, if possible, how they would accomplish it. Accordingly after examining the nest, I concealed my boat about thirty yards from the tree and stretching myself at full length on the bottom, with my head raised just enough to enable me to look over the gunwale, remained there for nearly two hours. Nothing of interest happened until 5.10, when a female Whistler came from the direction of the Megalloway and without any preliminary circling dropped into the water within a few yards of the nest tree. After floating motionless for about two minutes with head and neck erect, evidently watching and listening intently, she flew directly to the hole and alighting on its edge, perched there for an instant, flapping her wings a little to maintain her balance. She then popped in, throwing up her spread tail just as her body disappeared, much as a Duck does when diving. I saw nothing more of her during the next hour, but soon after she entered the nest two other female Whistlers flew over and around me several times and one of them finally alighted on the water and swam to the base of the stub, looking up at the hole intently as if she, too, had some interest in it. On

several occasions within the past few days we have seen three or four Whistlers hanging about this nest. These facts lead me to suspect that they have been taking turns at incubating the eggs and that one of them may have taken away the three missing young.

At 6.15 I returned to the house-boat for breakfast and Gilbert took my place. It was arranged that he should shout if the Whistler began taking out her young while I was away. I heard his signal just as I was preparing to go back and when I rejoined him found that I was too late. This is his account of what happened during my absence:—

“At 6.45 the old Duck appeared at the entrance to the nest, where she sat for five minutes moving her head continually and looking about in every direction included within her field of vision; then she sank back out of sight, reappearing at the end of a minute and looking about as before for another five minutes. At the end of this second period of observation she flew down to the water and swam round the stub three times, clucking and calling. On completing the third round she stopped directly under the hole and gave a single loud cluck or call, when the ducklings began scrambling up to the entrance and dropping down to the water in such quick succession as to fall on top of one another. They literally *poured* out of the nest much as shot would fall from one's hand. One or two hesitated or paused for an instant on reaching the mouth of the hole but the greater number toppled out over the edge as soon as they appeared. All used their tiny wings freely, beating them continuously as they descended. They did not seem to strike the water with much force.

“While this was going on the old Duck sat motionless on the water looking up at the nest. When the last duckling dropped at her side she at once swam off at the head of the brood, quickly disappearing in a flooded thicket a few rods away.”

In this connection it may be well to dwell for a moment on some of the statements which have been made by writers as to the manner in which the young of tree-nesting Ducks leave the nest. Dresser affirms (*Birds of Europe*, VI, p. 600) that the young of the European Golden-eye “are carried by the female in

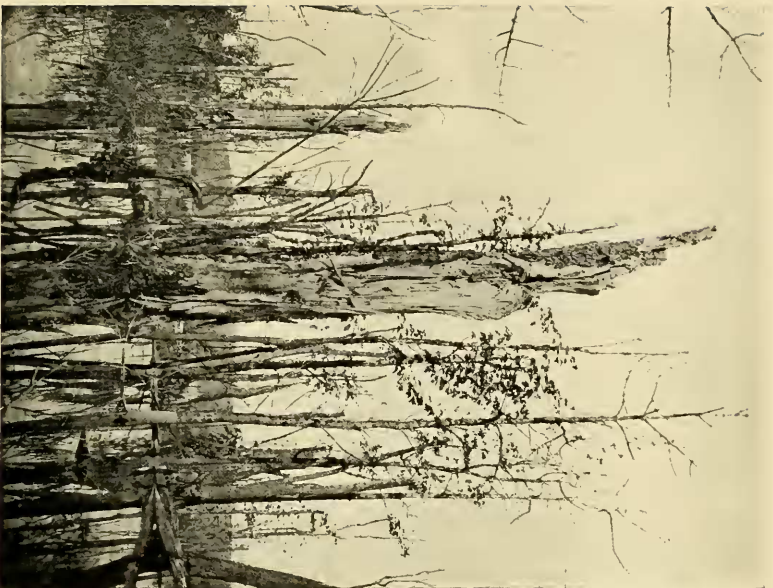


FIG. 1. WHISTLER'S NEST WITH NARROW ENTRANCE.



FIG. 2. WHISTLER'S NEST WITH ROUND ENTRANCE.

